

Title (en)
CIRCUIT AND METHOD FOR DETERMINING ANGULAR POSITION

Title (de)
SCHALTUNG UND VERFAHREN ZUR BESTIMMUNG EINER WINKELPOSITION

Title (fr)
CIRCUIT ET PROCÉDÉ POUR DÉTERMINER LA POSITION ANGULAIRE

Publication
EP 4170287 A1 20230426 (EN)

Application
EP 21204597 A 20211025

Priority
EP 21204597 A 20211025

Abstract (en)
A sensor circuit for determining an angular position of a rotating object configured for generating or modulating a magnetic field, the sensor circuit comprising: a) a first sensor for providing a first sensor signal (ss1); b) a second sensor for providing a second sensor signal (ss2); c) a signal correction block for receiving the first/second sensor signal (ss1,ss2) or a signal derived therefrom as a first/second input signal (Isig, Qsig), and for receiving a plurality of feedback signals (Idc_c, Qdc_c, Gmm_c); and configured for providing a first corrected signal (ladj) and a second corrected signal (Qadj); d) an angle calculation block configured for receiving the first and the second corrected signal (ladj, Qadj), and for determining said angular position signal (Φ) as a function of a ratio of the first and the second corrected signal (ladj, Qadj); e) a feedback block configured for receiving said angular position signal (Φ), and for generating said plurality of feedback signals (Idc_c, Qdc_c, Gmm_c) based on the angular position signal (Φ), with an improved linearity.

IPC 8 full level
G01D 5/14 (2006.01)

CPC (source: EP US)
G01B 7/30 (2013.01 - US); **G01D 5/145** (2013.01 - EP); **G01D 5/20** (2013.01 - US)

Citation (search report)

- [XY] US 2011246133 A1 20111006 - HARADA TOMOYUKI [JP], et al
- [XY] US 2014336878 A1 20141113 - YANAI KOHEI [JP], et al
- [Y] JP 2013253988 A 20131219 - ALLEGRO MICROSYSTEMS LLC
- [Y] US 2017248661 A1 20170831 - BLAGOJEVIC MARJAN [RS], et al
- [Y] US 2019011537 A1 20190110 - UTERMÖEHLEN FABIAN [DE], et al

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
EP 4170287 A1 20230426; CN 116026230 A 20230428; US 2023128615 A1 20230427

DOCDB simple family (application)
EP 21204597 A 20211025; CN 202211302616 A 20221024; US 202217971254 A 20221021